MINI ROJECT REPORT ON

"NEWSIFY"

Submitted By

Aman Singh and Keshav Mane

Under the Guidance of

Prof. Leena Patil

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Introduction:

The app Newsify is an interface between the user and news bulletins available on the web. It is an android application to improving the efficiency and reduces the complications occur during the news reading experience to maximum possible extent. Even though technology has corrupted humans still we are wasting our time energy money and resources on newspaper it is not feasible to use that much amount of paper of just reading some information, so simple solution for this problem is everyone has smartphones with internet facility they can get all the required information by just clicking few buttons. The manual reading of large newspaper demands considerable time and efforts. By automating this process with internet and help of APIs, Newsify can save a lot of precious time of users who are interested in reading bulletins.

Objective

When you launch Newsify, you can stay informed**,** with the best options going beyond the headlines to help you understand more about the world around you. The objective of the project is to make an application in android platform to Read News and Articles. In order to build such an application complete web support, need to be provided. A complete and efficient android application which can provide the News app experience is the basic objective of the project.

- Implement a system using Java in open-source environment.
- Achieve error free and fault tolerance news feeds in real time.
- Differentiated categories without clashing their subject using APIs.
- To implement a system can, provide automatic fetch news bulletins.
- To deploy the system on real time web server that can be access any user anytime, anywhere.

Problem Statement

The manual purchasing and reading of newspaper or keeping track of all feeds at one glance demands considerable time and efforts. The Newsify (News application) is a arrangement of all problems it provides all this information with better graphical user interface for better user experience, with different categories in which all given constraints are satisfied. Getting such news feeds in real time manually is complex and time- consuming process. By automating this process with internet and help of APIs, Newsify can save a lot of precious time of users who are interested in reading bulletins. Hence the aim is to develop practical approach for building Online News Application system, which can be used by any user with internet connection and android device.

Background and Challenges

Planning News application with real time bulletins is one of the most complex and error prone application. There are still serious problems like generation of accurate API from genuine sources while creating APIs these problems are repeating frequently also the difficulty faced during categorizing can be represented as a constraint satisfaction problem with loose parameters and many constraints. In the manual purchasing and reading of newspaper, one of the major problems is dealing with flexibility of usage and finding personal choice of news, and also it requires space to keep that much amount of paper. Finding particular bulletin or a particular date is a very difficult task. This creates a series of backtracks which are difficult to resolve.

System Analysis:

Identification of Need

- To provide correct bulletin, from authorized sources.
- Real time news articles
- To segregate the categories of the articles.
- To provide user friendly experience.
- Looking for online newspaper install Newsify mobile application right now.
- Online get connected from the web.
- Feasible for everyone, can be installed on any device.
- Read, articles with related images.

Scope of the Project

- The customer can easily install the app anytime, and it requires very less memory space.
- User don't have to register themselves for using the application on their device.
- User can easily read the articles with the related images.
- To make the system more user-friendly, the customer need not have to enter their personal details
- Customer will first choose the category, contents as per their choice.

FEASIBILITY STUDY

There are mainly three kind of feasibility study that are equally important for this software development:

Operational feasibility:

Operational feasibility is a measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development.

Economic Feasibility:

Economic feasibility is used for evaluating the effectiveness of a proposed system. This system is also known as cost/benefit analysis. The procedure is to determine the benefits and saving that are expected from a proposed system and compare them with the cost. If the benefit outweighs the cost, then the decision is made to design and implement the proposed system.

Technical Feasibility:

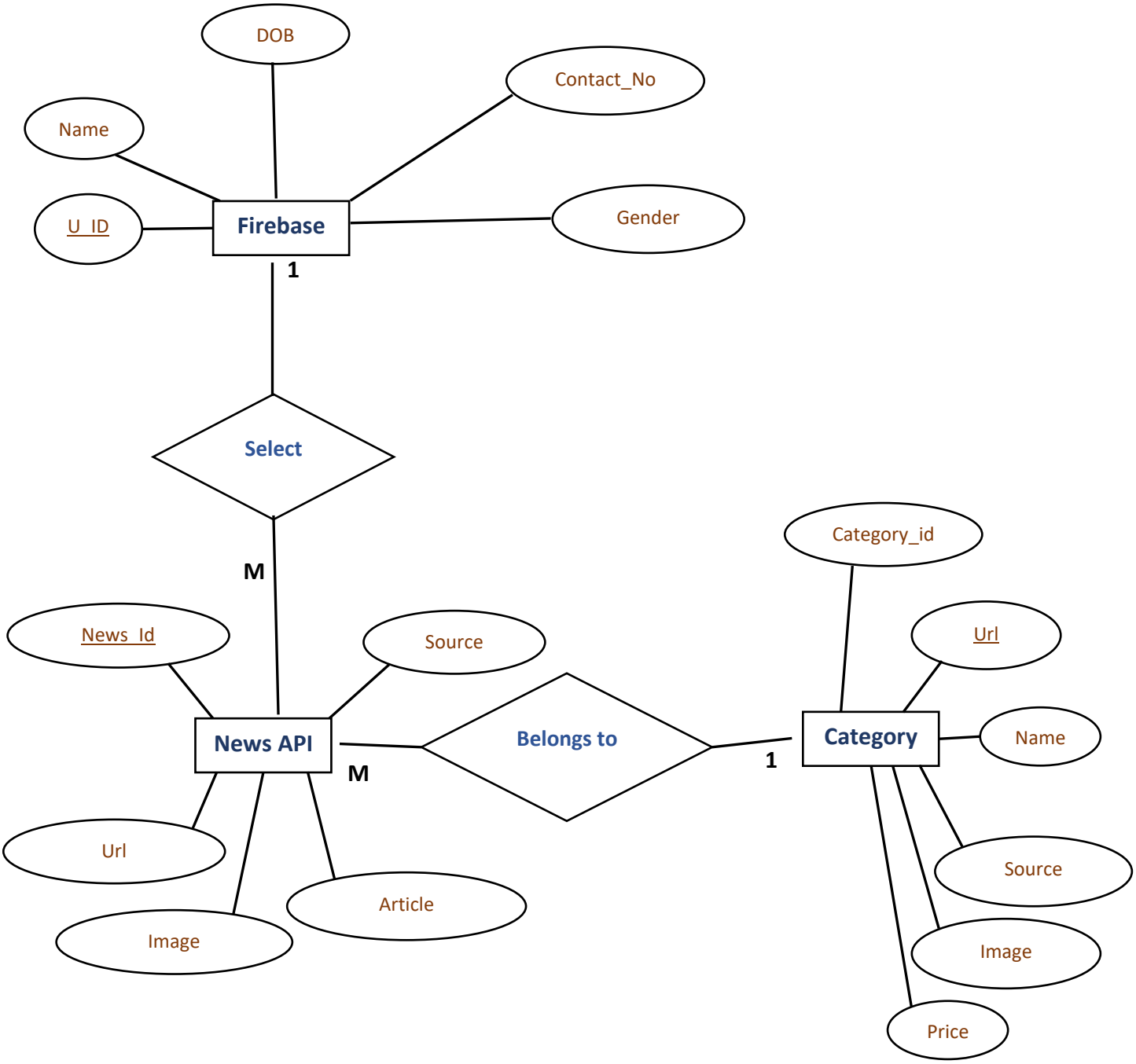
The technical aspect of feasibility is mainly concerned with the smooth operation and proper connectivity of the database regarding the software.

The criteria for technical feasibility:

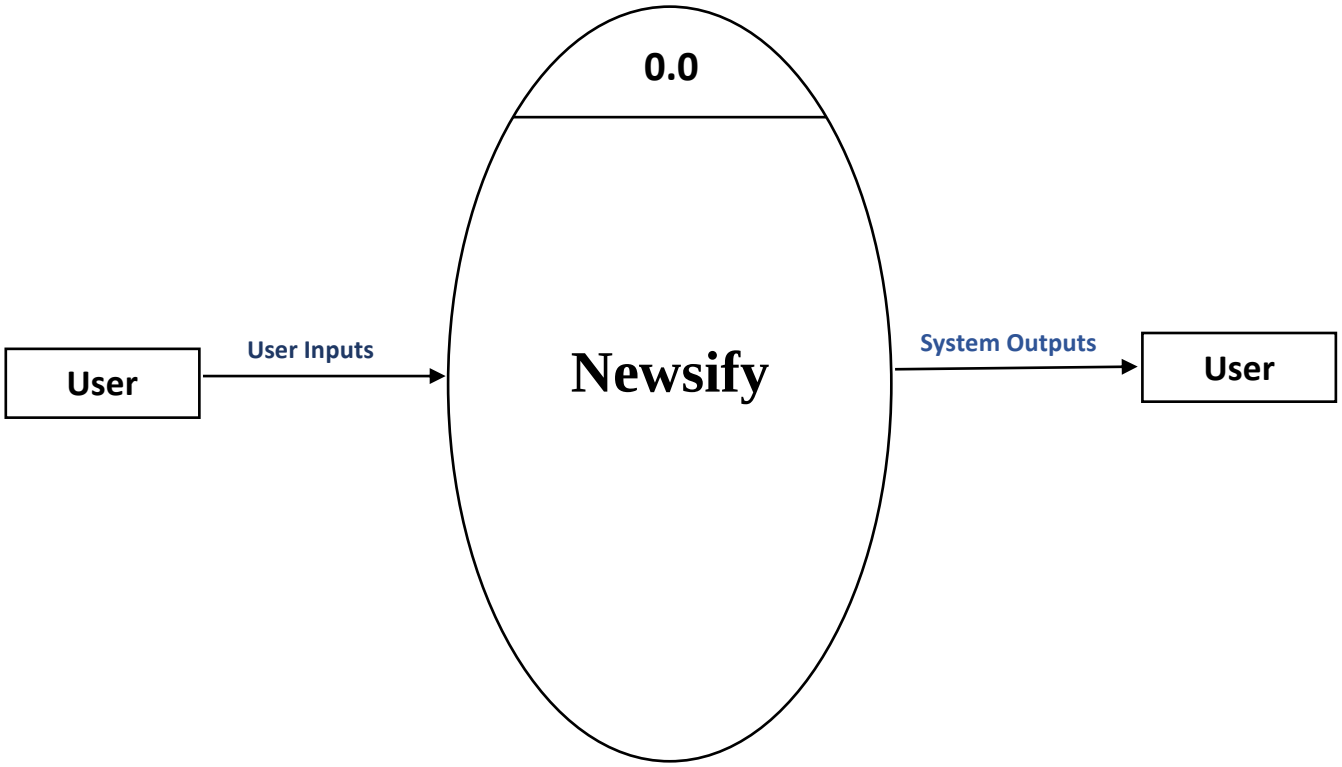
- Easy to use: the user is assumed to be normal ordinary people having knowledge of simple computer operations.
- Save time and efforts: since the entire data management task is done by the system, it saves lot of time, efforts and energy of the user to get the work done.

SYSTEM DESIGN

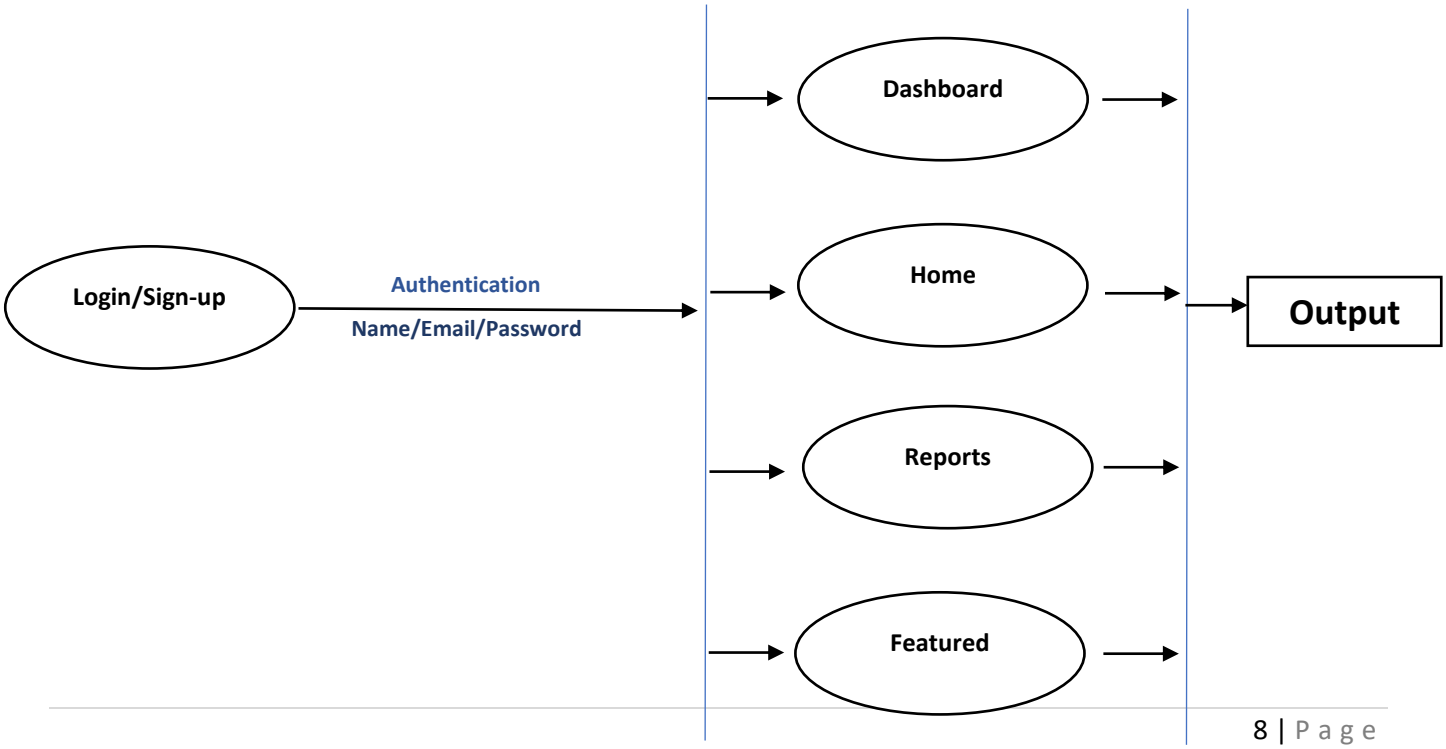
Entity Relationship Diagram (ERD)



Data Flow Diagram (DFD)



Level 1.0



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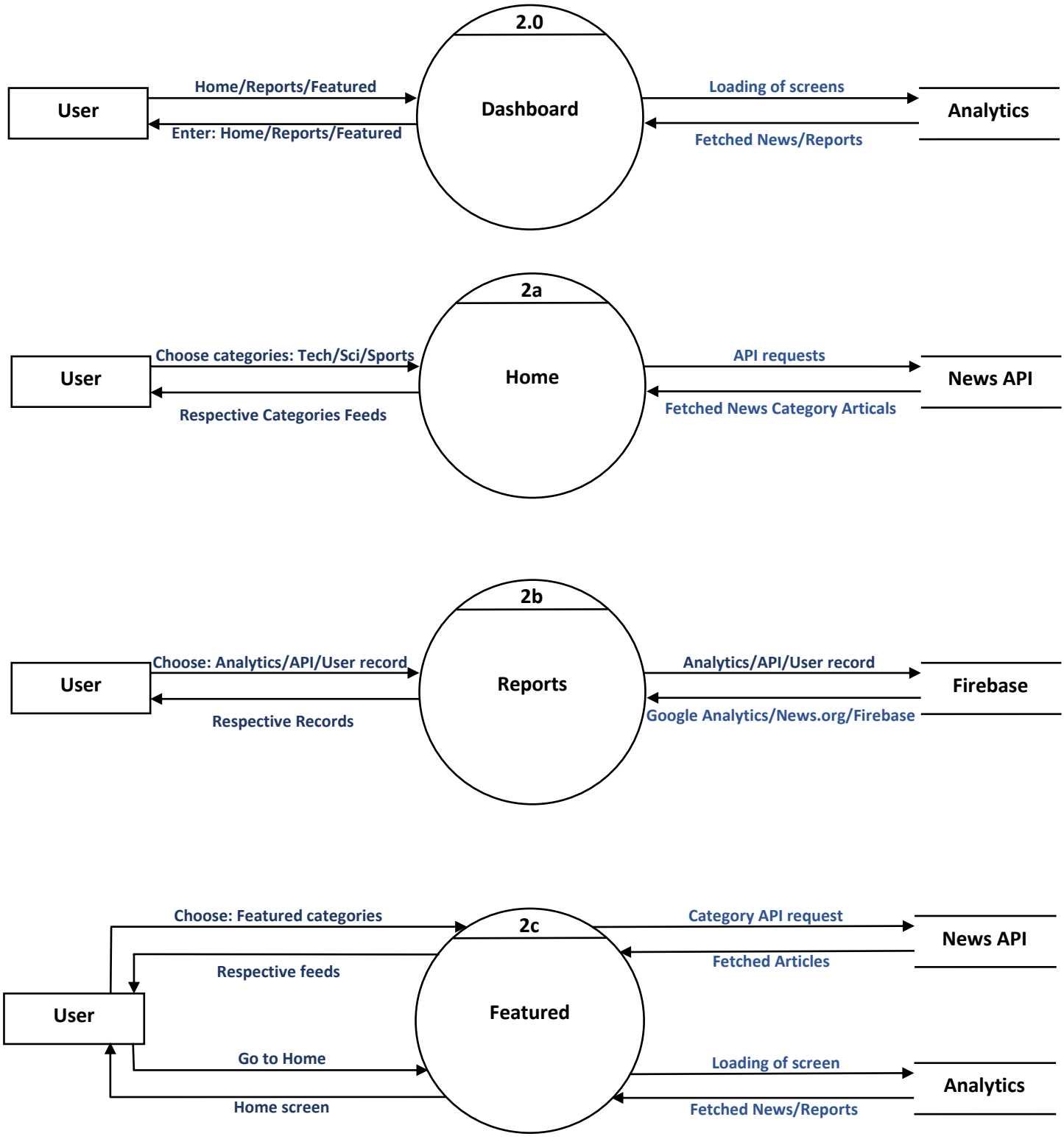
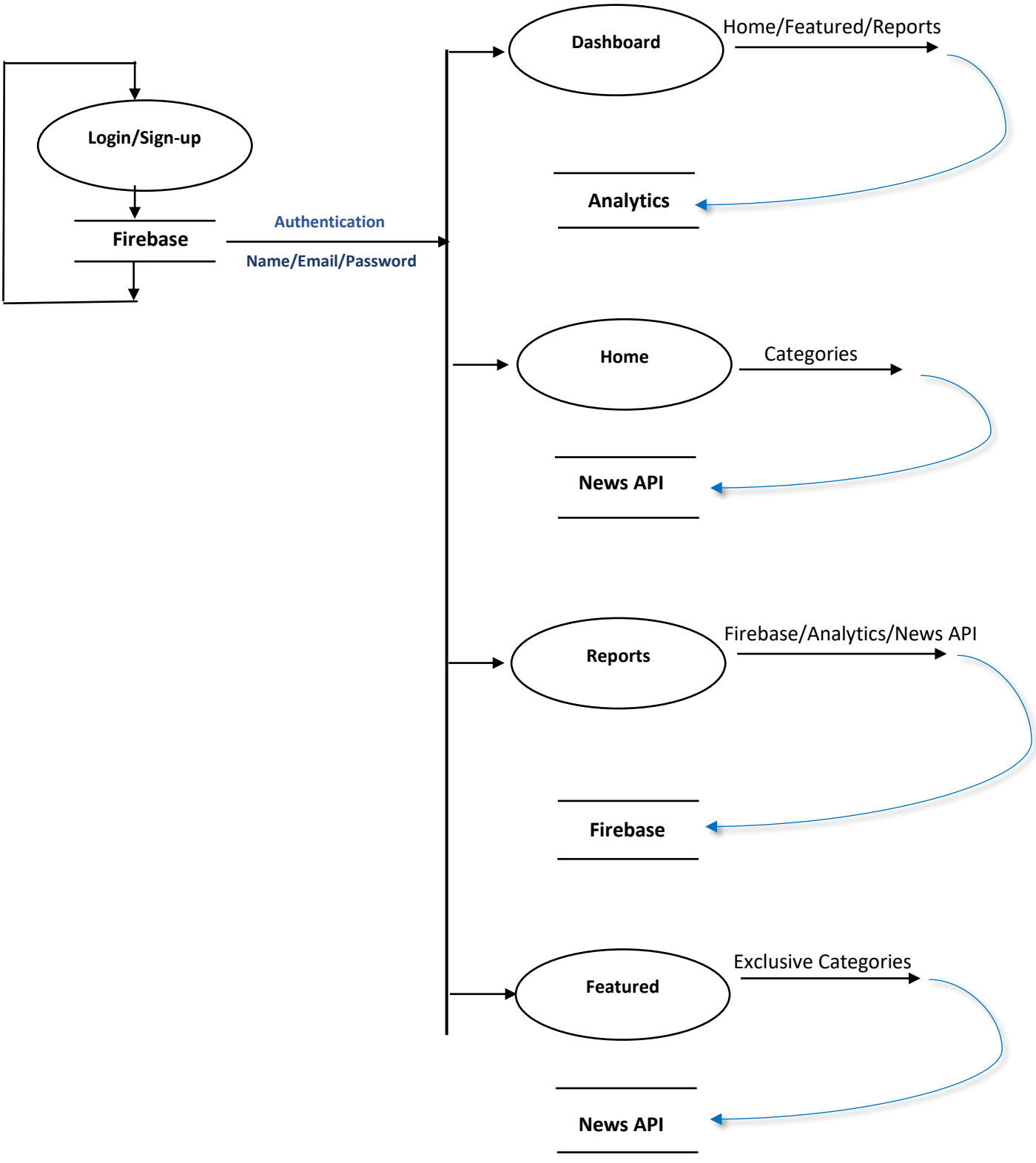
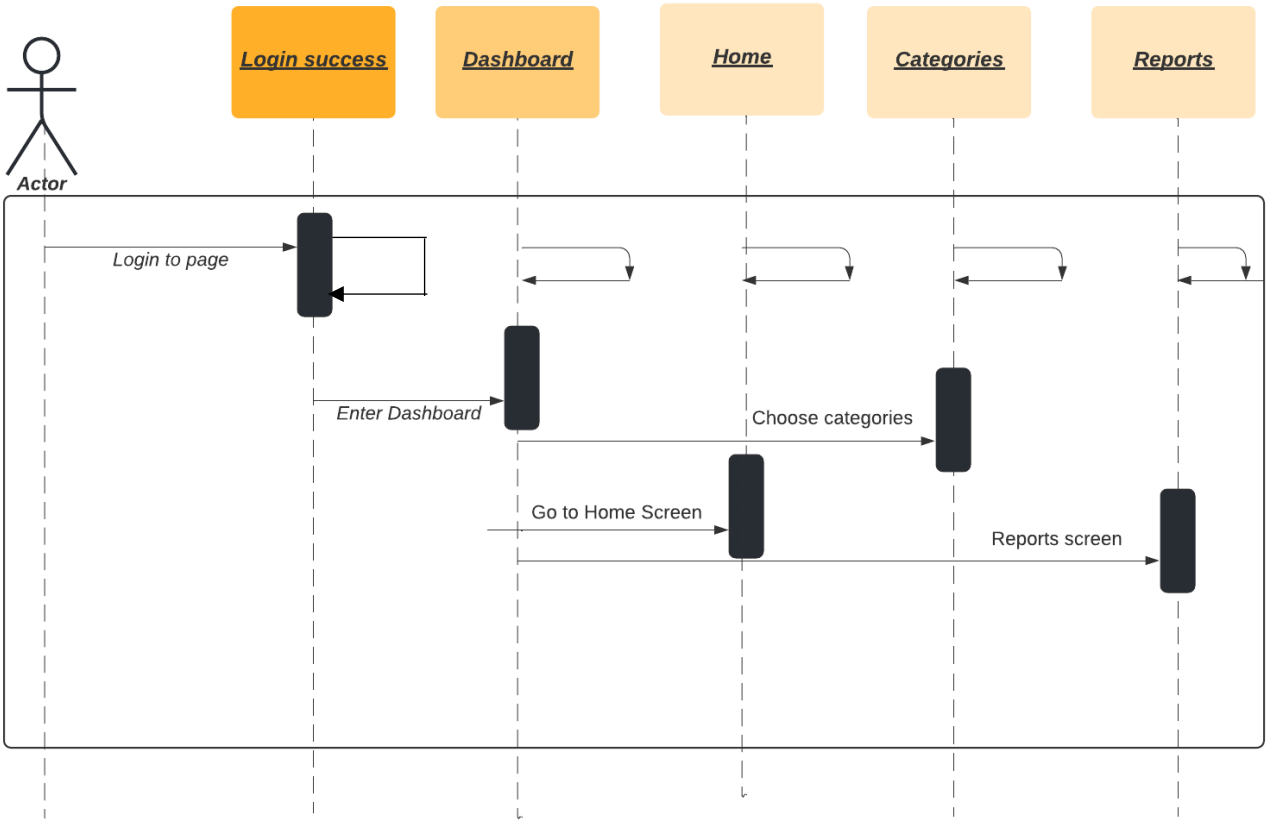

2.0
Dashboard
User
Home/Reports/Featured
Enter: Home/Reports/Featured
Loading of screens
Fetched News/Reports
Analytics
2a
Home
User
Choose categories: Tech/Sci/Sports
Respective Categories Feeds
API requests
Fetched News Category Articals
News API
2b
Reports
User
Choose: Analytics/API/User record
Respective Records
Analytics/API/User record
Google Analytics/News.org/Firebase
Firebase
2c
Featured
User
Choose: Featured categories
Respective feeds
Go to Home
Home screen
Category API request
Fetched Articles
News API
Loading of screen
Fetched News/Reports
Analytics

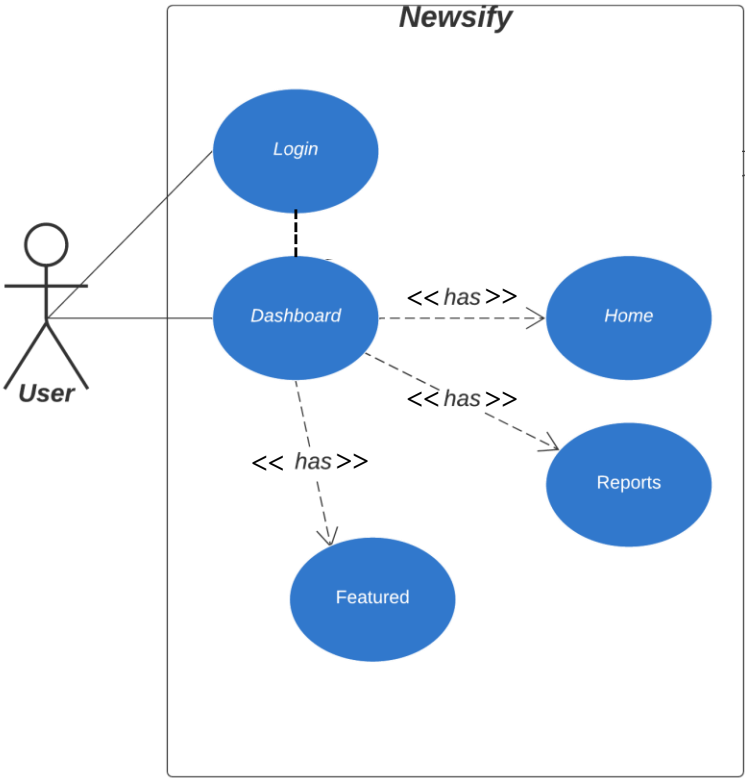
Level 3.0


Login/Sign-up
Firebase
Authentication
Name/Email/Password
Dashboard
Home/Featured/Reports
Analytics
Home
Categories
News API
Reports
Firebase/Analytics/News API
Firebase
Featured
Exclusive Categories
News API

Sequence Diagram



Use case Diagram



HARDWARE AND SOFTWARE REQUIREMENT

Performance Requirements:

Performance is measured in terms of the output provided by the application. Requirement specification plays an important part in the analysis of a system. Only when the requirement specifications are properly given, it is possible to design a system, which will fit into required environment. It rests largely with the users of the existing system to give the requirement specifications because they are the people who finally use the system. This is because the requirements have to be known during the initial stages so that the system can be designed according to those requirements. It is very difficult to change the system once it has been designed and on the other hand designing a system, which does not cater to the requirements of the user, is of no use. The requirement specification for any system can be broadly stated as given below: The system should be able to interface with the existing system.

- The system should be accurate
- The system should be better than the existing system The existing system is completely dependent on the user to perform all the duties.

Hardware Requirement:

Hardware	**Android Smartphone**
Speed	2.3GHz
Ram	2Gb
Memory Space	30Mb
Gesture (Clicks)	Touch
Version	4.1(Higher)

Software Requirement:

Operating System	**Android**
Technology	Java
IDE	Android Studio
JAVA version	17.0.1
Cloud Service	Firebase/News.org

Java

Java is a programming language originally developed by James Gosling at Sun Microsystems and released in 1995 as a core component of Sun Microsystems' Java platform. The language derives much of its syntax from C and C++ but has a simpler object model and fewer low-level facilities. Java applications are typically compiled to byte code (class file) that can run on any Java Virtual Machine (JVM) regardless of computer architecture. Java is a general purpose, concurrent, class-based, object-oriented language that is specifically designed to have as few implementation dependencies as possible. It is intended to let application developers write once, run anywhere. Java is currently one of the most popular programming languages in use, particularly for client-server web applications. One characteristic of Java is portability, which means that computer programs written in the Java language must run similarly on any hardware/operating-system platform. This is achieved by compiling the Java language code to an intermediate representation called Java byte code, instead of directly to platform specific machine code. Java byte code instructions are analogous to machine code, but are intended to be interpreted by a virtual machine (VM) written specifically for the host hardware. End-users commonly use a Java Runtime Environment (JRE) installed on their own machine for standalone Java applications, or in a Web browser for Java applets. Standardized libraries provide a generic way to access host-specific features such as graphics, threading, and networking.

Why we need JDBC?

- ODBC is not appropriate for direct use from Java because it uses a C interface.
- ODBC is hard to leam. It mixes simple and advanced features together, and it has Complex options even for simple queries.
- A Java API like JDBC is needed in order to enable a "Pure Java "solution.
- When ODBC is used, the ODBC driver manager and drivers must be manually Installed on every client machine.

Advantages of Java

- Purely Object oriented.
- Platform independent.
- It is dynamic, simple and robust.
- Easy to learn.
- Multithreaded. Secure.
- Wide variety of Application Programme Interfaces (APIS).
- Excellent networking capability.

Java in Web

Java covers the whole application form server to client and back again, it provides many powerful technologies, it can be used to extend the browser, and it provides good security system. HTML: HTML stands for hypertext markup Language. It is very useful to make web pages and very easy to learn. Hypertext Markup file is a text file containing small markup tags. These marks up tags tell the browser how to display a web page. It has two types of extensions one is html and second

is html but both are used for html web pages. For hypertext markup language you can use the simple text editor for example; use notepad for writing your HTML code in the windows. If you are using Mac, you can use simple text editor. HTML uses approach of what you see is what you get. You can also use to write tags other software that is FrontPage and Dreamweaver. In HTML character are surrounded by the tags. HTML tags come in pair. The beauty of this language is that it is not case sensitive. Every web page need HTML with it you cannot make the good web pages. And it is the base for every web page and used to display the text in the web pages there are some other latest versions of HTML like DHTML which stands for dynamic html and is used to make the web pages more interactive

Android Studio

Android Studio is the official Integrated Development Environment (IDE) for android application development. Android Studio provides more features that enhance our productivity while building Android apps. Android Studio was announced on 16th May 2013 at the Google I/O conference as an official IDE for Android app development. It started its early access preview from version 0.1 in May 2013. The first stable built version was released in December 2014, starts from version 1.0.

Features of Android Studio

- It has a flexible Gradle-based build system.
- It has a fast and feature-rich emulator for app testing.
- Android Studio has a consolidated environment where we can develop for all Android devices.
- Apply changes to the resource code of our running app without restarting the app.
- Android Studio provides extensive testing tools and frameworks.
- It supports C++ and NDK.
- It provides build-in supports for Google Cloud Platform. It makes it easy to integrate Google Cloud Messaging and App Engine.

Functional Requirements

- In software engineering, a functional requirement defines a function of a software systemor its component**.**
- A function is described as a set of inputs, the behaviour, and outputs
- Functional requirements may be calculations, technical details, data manipulation and processing and other specific functionality that define what a system is supposed to accomplish. Behavioural requirements describing all the cases where the system uses the functional requirements are captured in use cases
- Functional requirements are supported by non-functional requirements (also known as quality requirements), which impose constraints on the design or implementation (such as performance requirements, security, or reliability).
- Generally, functional requirements are expressed in the form "system must do

- <requirement>", while non-functional requirements are "system shall be <requirement>".The plan for implementing *functional* requirements is detailed in the system *design*. The plan for implementing *non-functional* requirements is detailed in the system *architecture*.

  As defined in requirements engineering, functional requirements specify particular resultsof a system. This should be contrasted with non-functional requirements which specify overall characteristics such as cost and reliability. Functional requirements drive the application architecture of a system, while non-functional requirements drive the technicalarchitecture of a system.

Non-Functional Requirements

Usability requirements

Usability is the ease of use and learns ability of a human-made object. The object of usecan be a software application, website, book, tool, machine, process, or anything a human interacts with. A usability study may be conducted as a primary job function bya usability analyst or as a secondary job function by designers, technical writers, marketing personnel, and others. Usability includes methods of measuring usability, such as needs analysis and the study of the principles behind an object's perceived efficiency or elegance. In human-computer interaction and computer science, usability studies the elegance and clarity with which the interaction with a computer program ora web site (web usability) is designed. Usability differs from user satisfaction and user experience because usability also considers usefulness.

Reliability requirements

Reliability deals with the study, evaluation, and life-cycle management of reliability: the ability of a system or component to perform its required functions under stated conditions for a specified period of time. Reliability engineering is a sub-discipline within systems engineering. Reliability is theoretically defined as the probability of failure, the frequency of failures, or in terms of availability, a probability derived from reliability and maintainability. Maintainability and maintenance may be defined as a part of reliability engineering. Reliability plays a key role in cost-effectiveness of systems.

Portability requirements

Portability in high-level computer programming is the usability of the same software in different environments. The pre-requirement for portability is the generalized abstraction between the application logic and system interfaces. When software with thesame functionality is produced for several computing platforms, portability is the key issue for development cost reduction.

Efficiency requirements

Resource consumption for given load describes efficiency of product and web site.

Performance requirements

Performance metrics include availability, response time, channel capacity, latency, completion time, service time, bandwidth, throughput, relative efficiency, scalability, performance per watt, compression ratio, instruction path length and speed up**.**

- Short response time for a given piece of work
- High throughput (rate of processing work)
- Low utilization of computing resource(s)
- High availability of the computing system or application
- Fast (or highly compact) data compression and decompression
- High bandwidth / short data transmission time

Organisational Requirements

Delivery requirements

Delivery requirements include details of delivery of product on time and as per client requirements. The products should be delivered on prescribed standard.

Implementation requirements

Implementation is the realization of an application, or execution of a plan, idea, model,design, specification, standard, algorithm, or policy. An implementation is a realization of a technical specification or algorithm as a program, software component, or other computer system through programming and deployment. Many implementations may exist for a given specification or standard. For example, web browsers contain implementations of World Wide Web Consortium-recommended specifications, and software development tools contain implementations of programming languages.

Standard requirements

The project should be developed as per standard format specified by IEEE.

Typical platforms include a computer architecture, operating system, programming languages and related user interface. The product should be developed as per client's standard requirements.

External Requirements

Interoperability requirements

Interoperability is a property of a product or system, whose interfaces are completely understood, to work with other products or systems, present or future, without any restricted access or implementation.

The IEEE Glossary defines interoperability as: The ability of two or more systems or components to exchange information and to use the information that has been exchanged.

Legislative requirements

In the proprietary software industry, an end-user license agreement or software licenseagreement is the contract between the licensor and purchaser, establishing the purchaser's right to use the software. The license may define ways under which the copy can be used.Software companies often make special agreements with large businesses and government entities that include support contracts and specially draftedwarranties.

Privacy requirements

The term "privacy" means many things in different contexts. Different people, cultures, and nations have a wide variety of expectations about how much privacy aperson is entitled to or what constitutes an invasion of privacy.

Privacy is the ability of an individual or group to seclude themselves or information about themselves and thereby reveal themselves selectively. The boundaries and content of what is considered private differ among cultures and individuals, but share basic common themes. Privacy is sometimes related to anonymity, the wish toremain unnoticed or unidentified in the public realm.

Safety requirements

Safety can also be defined to be the control of recognized hazards to achieve an acceptable level of risk. Safety is the state of being "safe", the condition of being protected against physical, social, spiritual, financial, political, emotional, occupational, psychological, educational or other types or consequences of failure, damage, error, accidents, harm or any other event which could be considered non- desirable.

System Design:

The main objective of this android application is to sort all the main categories from the world bulletin and showcase it in an android application with use of internet. So that the user doesn't have to buy the newspaper. It manages all the bulletin about Technology, Science, Business, Health, Sports etc. The project is totally built at user end and thus only the user is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the hard copies of newspaper and magazines.

3

Or you could get it from a Restaurant

Professionla Chefs would already have all the required resources.

We are here to help you !!

4

But the Chef don't want you to access all their stuff

For safety and security purposes

**#coughs , Nope

5

That is where an intermediate is needed to provide allowed service from one end to another

That is called an

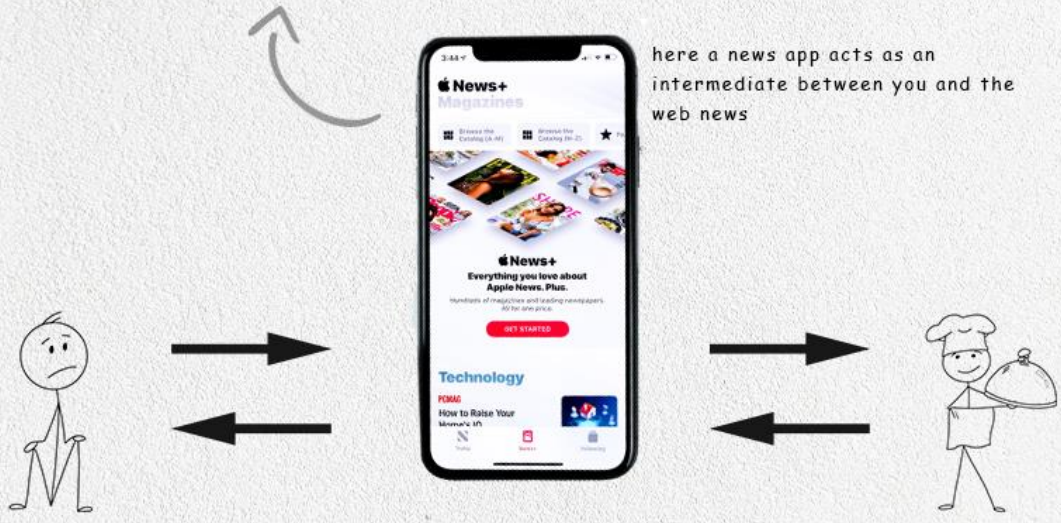
API

Application Programming Interface

6

API

is a software intermediary that allows two applications to talk to each other



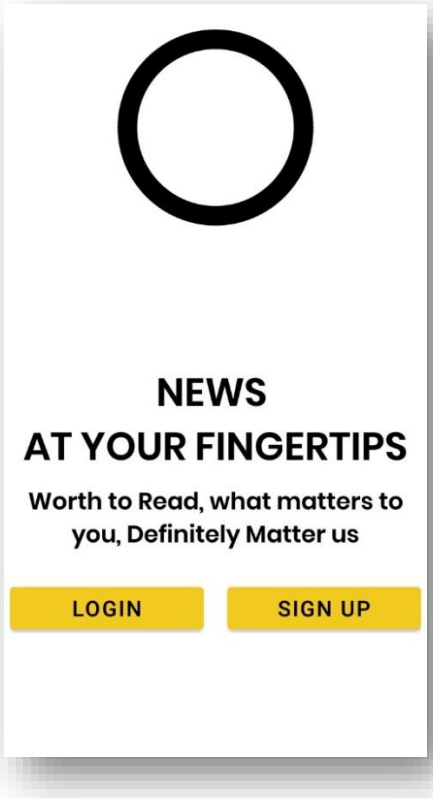
7

One common Application of API is

Sign up on different sites using Google or Facebook

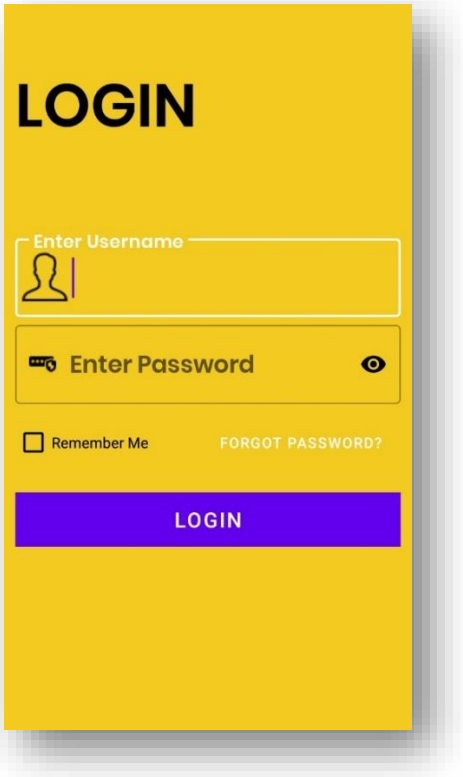
Why code everything from scratch when someone has already built it

Screen shots of project



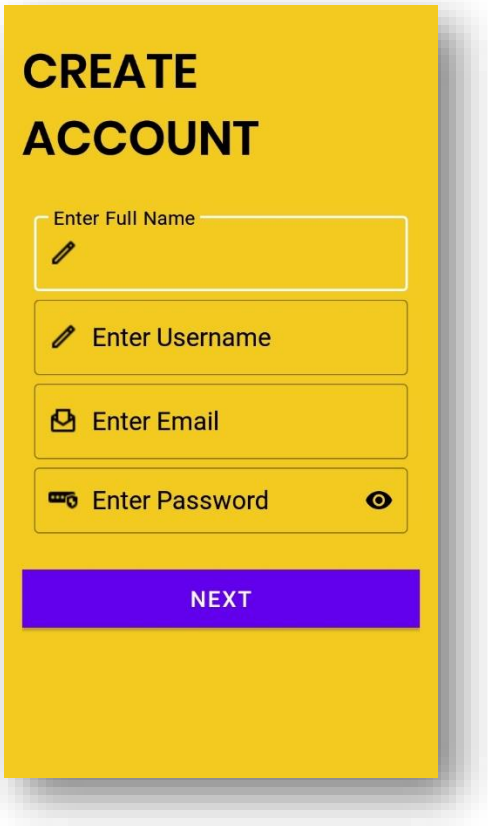
Login Page:

This is the first page which user will encounter to enter in the app, here the user will get two options Login and Sign-up. If the user is already logged in then he can directly enter in app by just entering the credentials, and if the user is new for this app, then he/she will be required to fill the respective details.



Login Page:

This is the portal where user can their details which are shown above email address and User password. There is an option of 'remember me' which allows user to store their credentials for the future so that they don't need to enter the credentials again and again. One more facility is also given 'forgot password' this is to provide a chance to retrieve their account from the serve. After clicking on Login user will enter in the app.



Sign-up:

Here user have to create a new account for themselves by giving their respective details.

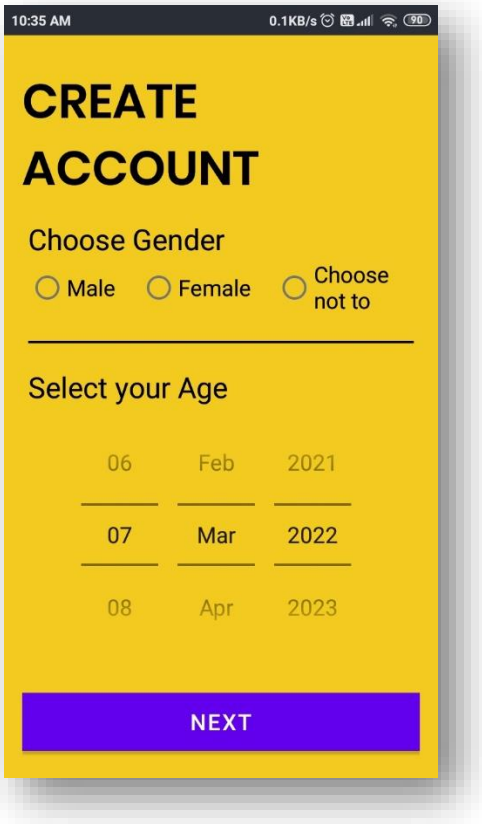
1.Enter Full Name: User full name.

2.Enter Username: User's Personal username for the app.

3.Enter email: email address of the user.

4.Password: User defined password.

If the user leaves any section empty, they will get pop up message "Fields required" this will help the user to fill all the sections and not leave any.



Sign-up:

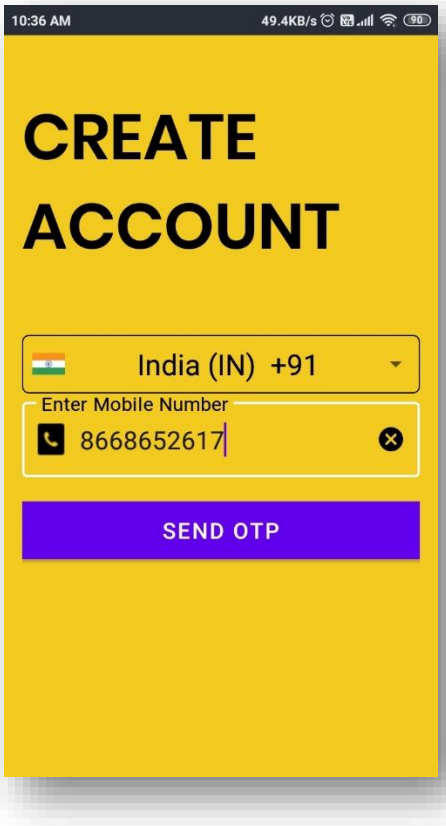
This is the second page for the user to fill in order to create an account, here the user will have to enter their 'gender' and they have to select their age by the help of calendar given.

The age limit for this app is 14 years, means people with age above 14yrs can only use this app.

In this page all fields are mandatory like previous ones.

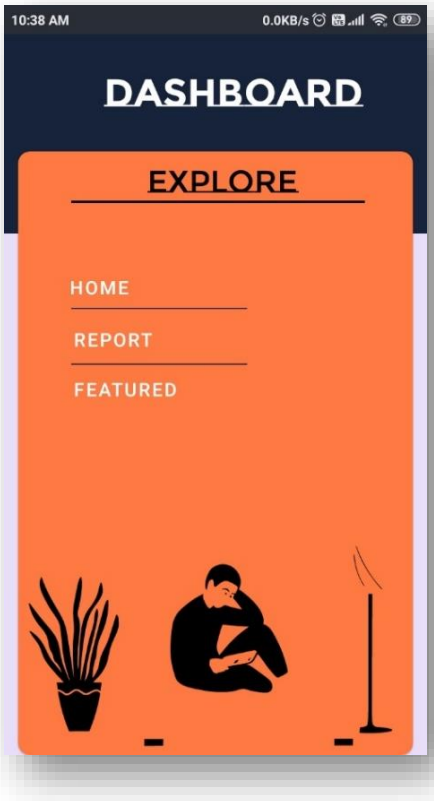
Verify OTP:

Here the user has to enter the OTP which they have received after entering the mobile number. By verifying the OTP, they will directly enter in the app.



Phone Number:

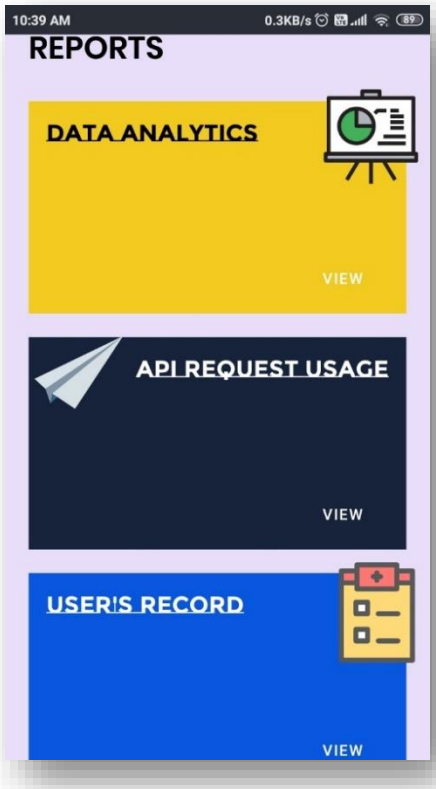
In order to get them registered the user has to enter the phone number, they have to enter the phone of that device on which they want to use the app or phone number of that device in which the app is installed. After that they will get an OTP on that respective phone number.



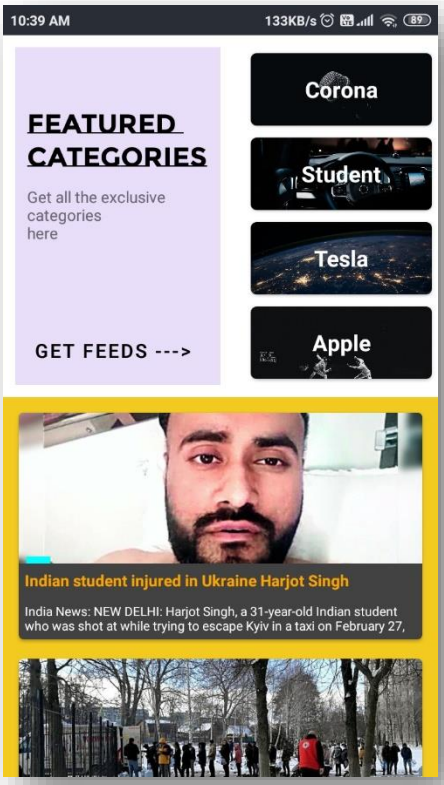
Dashboard:

This is dashboard or the main landing page, from there the user can explore the whole app,
Home: this will lead to the news bulletin page or the categories page.
Report: this will lead to the reports section of the app.
Featured: this will lead to the featured trending categories of the app and from here user can go back to the home page directly.

Home page:
Here all the categories are available user can simply choose by just clicking on them and can read the full article.



Reports:
Here all the reports are available of the app
1.Data analytics.
2.API requests usage
3.User’s record.



Featured categories:
The trending categories are available here with some small preview.

Code for Main Activity Page

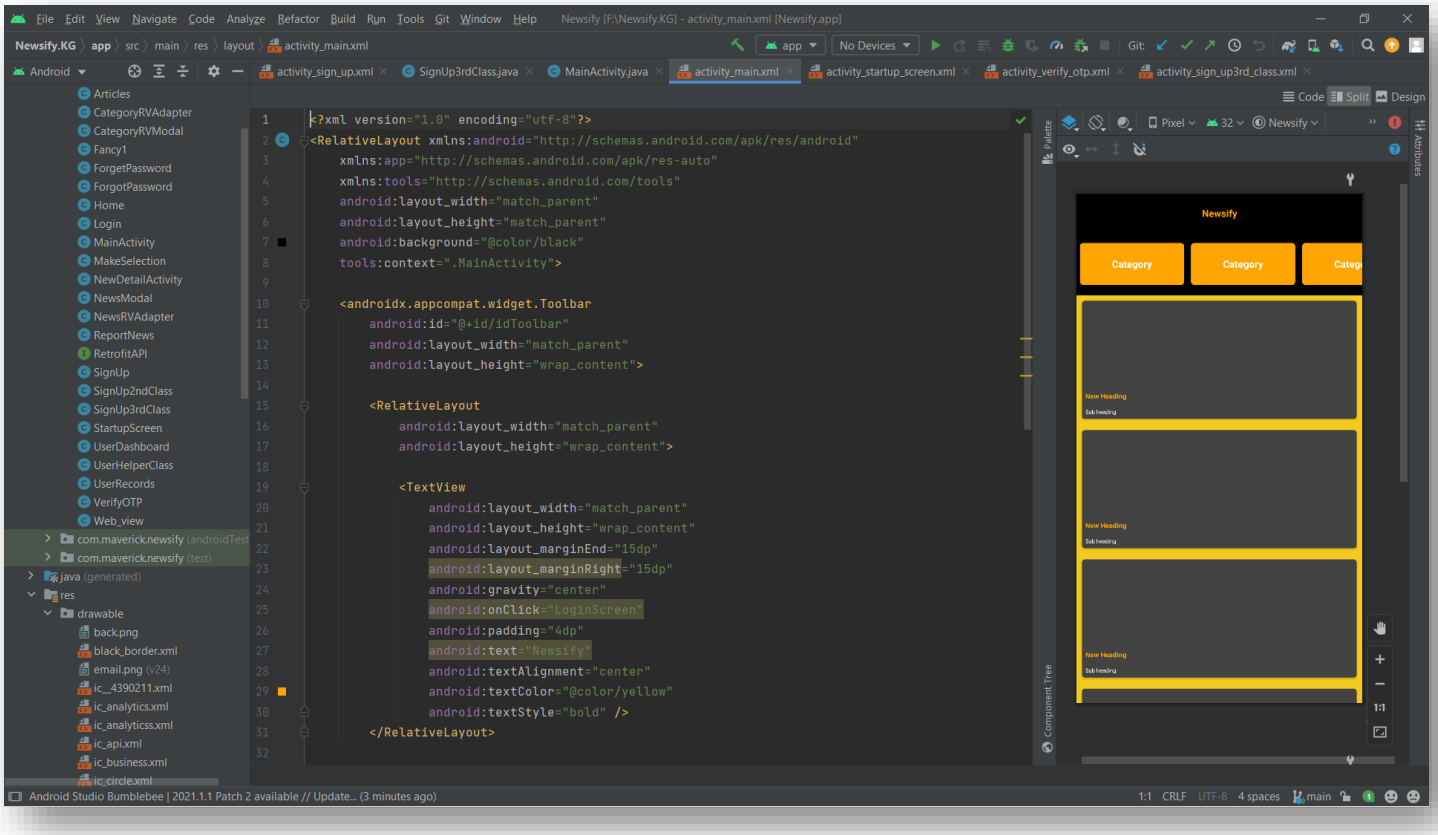
```
package com.maverick.newsify;

import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.ProgressBar;
import android.widget.Toast;

import java.util.ArrayList;

import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;
import retrofit2.Retrofit;
import retrofit2.converter.gson.GsonConverterFactory;

public class MainActivity extends AppCompatActivity implements
CategoryRVAdapter.CategoryClickInterface{

    //cb0ecff5821d4ca2a2e4e09490f0ac50
   // 8006f1e5052a42059e2e376412cda54f

    private RecyclerView newsRV, categoryRV;
    private ProgressBar loadingPB;
    private ArrayList<Articles> articlesArrayList;
    private ArrayList<CategoryRVModal> categoryRVModalArrayList;
    private CategoryRVAdapter categoryRVAdapter;
    private NewsRVAdapter newsRVAdapter;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        newsRV = findViewById(R.id.idRVNews);
        categoryRV = findViewById(R.id.idRVCategories);
        loadingPB = findViewById(R.id.idPBLoading);
        articlesArrayList = new ArrayList<>();
        categoryRVModalArrayList = new ArrayList<>();
        newsRVAdapter = new NewsRVAdapter(articlesArrayList,this);
        categoryRVAdapter = new
CategoryRVAdapter(categoryRVModalArrayList,this,this::onCategoryClick);
        newsRV.setLayoutManager(new LinearLayoutManager(this));
        newsRV.setAdapter(newsRVAdapter);
        categoryRV.setAdapter(categoryRVAdapter);
        getCategories();
        getNews("All");
        newsRVAdapter.notifyDataSetChanged();
    }
```

```
    private void getCategories(){
        categoryRVModalArrayList.add(new
CategoryRVModal("All","https://images.unsplash.com/photo-1565478441918-
ba8d56c559a9?ixlib=rb-
1.2.1&ixid=MnwxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8&auto=format&fit=crop&
w=2070&q=80\n"));
        categoryRVModalArrayList.add(new
CategoryRVModal("Technology","https://images.unsplash.com/photo-
1601026967915-281d3160683b?ixlib=rb-
1.2.1&ixid=MnwxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8&auto=format&fit=crop&
w=1170&q=80"));
        categoryRVModalArrayList.add(new
CategoryRVModal("Science","https://images.unsplash.com/photo-1451187580459-
43490279c0fa?ixlib=rb-
1.2.1&ixid=MnwxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8&auto=format&fit=crop&
w=2072&q=80"));
        categoryRVModalArrayList.add(new
CategoryRVModal("Sports","https://images.unsplash.com/photo-1529751480052-
2f3f1839834e?ixlib=rb-
1.2.1&ixid=MnwxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8&auto=format&fit=crop&
w=1170&q=80"));
        categoryRVModalArrayList.add(new
CategoryRVModal("General","https://images.unsplash.com/photo-1616858713821-
f809435d3bfc?ixlib=rb-
1.2.1&ixid=MnwxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8&auto=format&fit=crop&
w=1170&q=80"));
        categoryRVModalArrayList.add(new
CategoryRVModal("Business","https://images.unsplash.com/photo-1497091071254-
cc9b2ba7c48a?ixlib=rb-
1.2.1&ixid=MnwxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8&auto=format&fit=crop&
w=1174&q=80"));
        categoryRVModalArrayList.add(new
CategoryRVModal("Entertainment","https://images.unsplash.com/photo-
1560184611-ff3e53f00e8f?ixlib=rb-
1.2.1&ixid=MnwxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8&auto=format&fit=crop&
w=1329&q=80"));
        categoryRVModalArrayList.add(new
CategoryRVModal("Health","https://images.unsplash.com/photo-1500291070270-
3daa480b7bd6?ixlib=rb-
1.2.1&ixid=MnwxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8&auto=format&fit=crop&
w=1169&q=80"));

        categoryRVAdapter.notifyDataSetChanged();
    }

    private void getNews(String category){
        loadingPB.setVisibility(View.VISIBLE);
        articlesArrayList.clear();
        String categoryUrl = "https://newsapi.org/v2/top-
headlines?country=in&category="+ category
+"&apiKey=8006f1e5052a42059e2e376412cda54f";
        String url = "https://newsapi.org/v2/top-
headlines?country=in&excludeDomains=stackoverflow.com&sortBy=publishedAt&lang
uage=en&apiKey=8006f1e5052a42059e2e376412cda54f";
        String BASE_URL = "https://newsapi.org/";
        Retrofit retrofit = new Retrofit.Builder()
                .baseUrl(BASE_URL)
```

```
                .addConverterFactory(GsonConverterFactory.create())
                .build();
        RetrofitAPI retrofitAPI = retrofit.create(RetrofitAPI.class);
        Call<NewsModal> call;
        if(category.equals("All")){
            call = retrofitAPI.getAllNews(url);
        }else{
            call = retrofitAPI.getNewsByCategory(categoryUrl);
        }

        call.enqueue(new Callback<NewsModal>() {
            @Override
            public void onResponse(Call<NewsModal> call, Response<NewsModal>
response) {
                NewsModal newsModal = response.body();
                loadingPB.setVisibility(View.GONE);
                ArrayList<Articles> articles = newsModal.getArticles();
                for(int i = 0; i < articles.size(); i++){
                    articlesArrayList.add(new
Articles(articles.get(i).getTitle(),articles.get(i).getDescription(),articles
.get(i).getUrlToImage(),articles.get(i).getUrl(),articles.get(i).getContent()
));

                }

                newsRVAdapter.notifyDataSetChanged();
            }

            @Override
            public void onFailure(Call<NewsModal> call, Throwable t) {
                Toast.makeText(MainActivity.this,"Fail to get news",
Toast.LENGTH_SHORT).show();
            }
        });


    }

    public void LoginScreen(View view){
        startActivity(new
Intent(getApplicationContext(),StartupScreen.class));
    }
    @Override
    public void onCategoryClick(int position) {
        String category =
categoryRVModalArrayList.get(position).getCategory();
        getNews(category);
    }
}
```

This page is the main java code page of the project because all the APIs and image URLs are mentioned. From this all the other pages are connected every information is fetched in this code.

This is the design page (XML) of the Main Activity Screen



Validation Checks:

The process of evaluating software during or at the end of the development process to determine whether it satisfies specified requirements.

- Email validation: @gmail.com is compulsory.
- Fields can't be empty.
- Age limit is 14yrs.
- Show password.
- Mobile number.
- Verify OTP.

Data Dictionary

Login

Sr.No.	Field Name	Datatype	Constraint	Description
1	Username	Varchar	Not Null	User's username
2	Password	Varchar	Not Null	User's Password

Sign-up

Sr.No.	Field Name	Datatype	Constraint	Description
1	Full name	Integer	Not Null	User full name
2	User name	Varchar	Not Null	Name for app
3	Email	Varchar	Not Null	Email address
4	Password	Varchar	Not Null	Password
5	Gender	Varchar	Not Null	Male/Female
6	Date of Birth	Date	Not Null	Date of birth of user
7	Mobile number	Integer	Not Null	Mobile number of user

(Create Account)									
Index: Firebase									
S.No	**Description**	**Name**	**Type**	**Width**	**Dec**	**Null**	**Reference**	**Rule**	**Default**
1	Full name of the user.	Enter_full_name	VC	1000		N			
2	Unique username of the user to use the app.	Enter_username	VC	100		N		Primary Key	
3	Unique email address of the user for verification purpose.	Enter_email	VC	200		N			
4	Unique password of the user for entering in the app.	Enter_password	VC	20		N			
5	User have to choose accordingly and if they don't want to choose any they can choose 'Choose not to'.	Choose_gender	VC	1		N			
6	User's age, age shouldn't be below 14 years.	Select_your_age	DATE	10		N			
7	Phone number of the user, same device in which the app is installed.	Phone_number	INT	10		N			

Proposed enhancement

Current system is designed in short amount of time so all functionality are not included in the system. More functionality can be included in the system in feature to help user of the system. There is no calculator for customers. SMS message alert will be including in this system to help the customer to know the details status about Home.

Implementation and Maintenance:

When project is run for the first time it allowed the user to select as who he/she wants to login in the system. It also has Sign-up option for new users, they can easily get them registered in few steps. After entering in the app (successful Login) user will see Dashboard from where he/she can explore the whole app with just one click. Next, we provide a home page where all the categories like Technologies, Science, Sports, Health, Business, Entertainment etc are mentioned at the top user can choose any category as per his/her taste after choosing the respective category they will get the news bulletins from different sites servers and new channels (all the news articles are Realtime) then there is a option of read button if clicked the user will be directed to the main full article google page, from where they can read the full article with some suggestions also. Return back to the dashboard, now the next page is Reports. In reports page there are three options 1. Data analytics 2. News API requests 3. User's Records, each report will show different type of data which are interpreted and formed after usage of the application 1. Data analytics: All the data regarding the application, that how much is the screen time, how many people have used the application from which part they have used, all these records will be shown here. 2. News API requests: Every time a user clicks on categories an API requests is triggered the count of that API is shown here with date and number of requests per day. 3. User's Records: User have already entered in the application with the help of OTP verification so that mobile number is registered and that information is displayed here. The last page is Featured, in this some exclusive and trendy genre of news bulletins are displayed with some glimpses of images. User can choose any and can read the full article.

Test Procedures and Implementation

Test procedure

The software testing is the critical element of software quality assurance and represents the ultimate review of the software design and coding. The main objective of the testingis to find an error and to uncover the errors that are not yet discovered.

The increasing visibility of software as a system element and the attendant cost associated with a software failure and motivating forces for well planned, through testing. It is nounusual for a software development organization to expand between 30% to 40% of project efforton testing. In the extreme, testing of human related software can cost 3-5 time as much as all othersoftware engineering activities combined. the testing phase involves the testing of the system usingvarious test data, preparation of the test data plays a vital role in the system testing after preparingthe test data, error was found and corrected by using the following the testing steps and correction are recorded for future reference. Thus, a series of testing is performed on the system before it is ready for implementation.

After completion of system analysis, design and coding through testing of the system was carried out in a systematic approach, the main objectives of the system are:

- To ensure that the operations of the system will perform as per the specification.
- To make sure that the system meets the user requirement during the operations.
- To cross check the when correct input are filled into the system output are correct.
- To make sure that during the operation incorrect inputs and the outputs will be detected.

In testing process the number of strategies has been used as mentioned below,

- Unit Testing.
- Integration Testing.
- Validation Testing.
- Black Box Testing.
- User acceptance Testing.

Unit Testing

Unit testing focuses verification efforts on the smallest unit of the software design. Using the system test plan, prepare in the design phase of the system development as guide, important control path is tested to uncover error within boundary of the module. The interface ofeach of the module was tested to ensure proper flow of information into and out of the module under consideration. Each module will be tested individually so as to make the individualcomponent error free. Also, other attached modules will be error free.

Integration Testing:

Each module will be tested of its effect on other module by integrating the modules.This will remove further errors from the system and may also result in some changes in the individual module.

Validation Testing

At the culmination of the integration testing the software was completely assembledas package, interfaces have been uncovered, and a final series of software validation testing began.Here we test the system function manner that can be reasonably by the customer, the system was tested against system requirement specification.

Black Box Testing:

After performing validation testing, the next phase is output test of the system, since no system code is useful if it does not produce the desired output in desired format. By considering the format of the report/output, report/output is generated or displayed and tested.

User Acceptance Testing:

User acceptance testing is used to determine the whether the software is fit for the user to use. The System under consideration was listed for user acceptance by keeping constanttouch with the prospective user of the system at the time of design, development and makingchange whenever required.

Future Scope:

The project has covered almost all the requirements. The project has a very vast scope in future. The project can be implemented on offline mode in future. Project can be updated in near future as and when requirement for the same arises, as it is very flexible in terms of expansion.
All the details which are taken from the user will be stored in the database (Firebase) for future use, these details of the user will be used for data analysis means what is the average age of our main stream user and what type of categories are more requested in the app, what is the screen time of the app, from which part of the country this app is used the most or been installed.

The following are the future scope for the project.

- Discontinue of particular sites, categories.
- Sub articles.
- Profile of user
- Will store the user credentials for data analysis
- On basis of the user's taste and requirements the Featured page will be upgraded.
- The app will have a automated chat bot for instructions to help the user to understand the application faster.

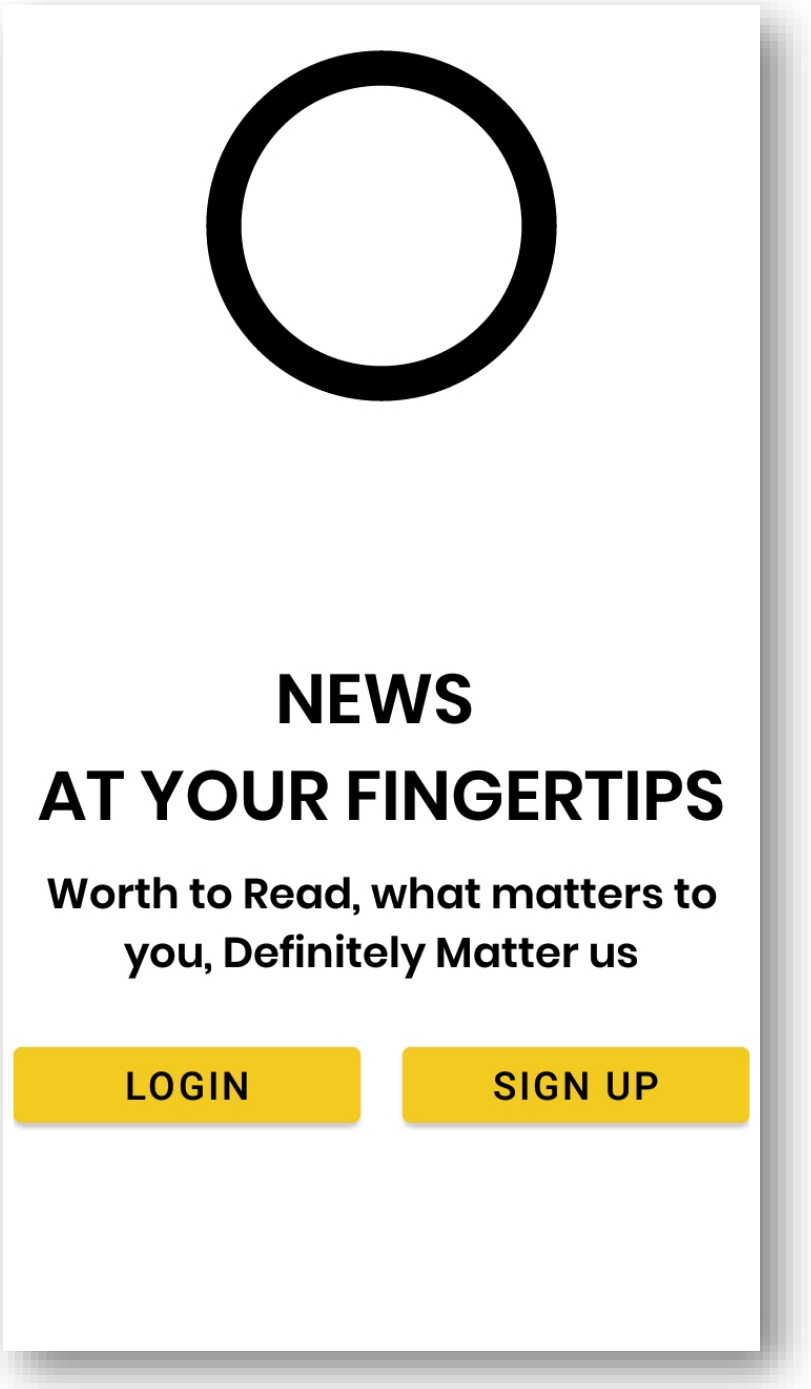
BIBLIOGRAPHY

- **Project guide**
- **The Complete Reference Android Studio**
- **www.stackoverflow.com**
- **www.youtube.com**
- **Experienced Professionals**

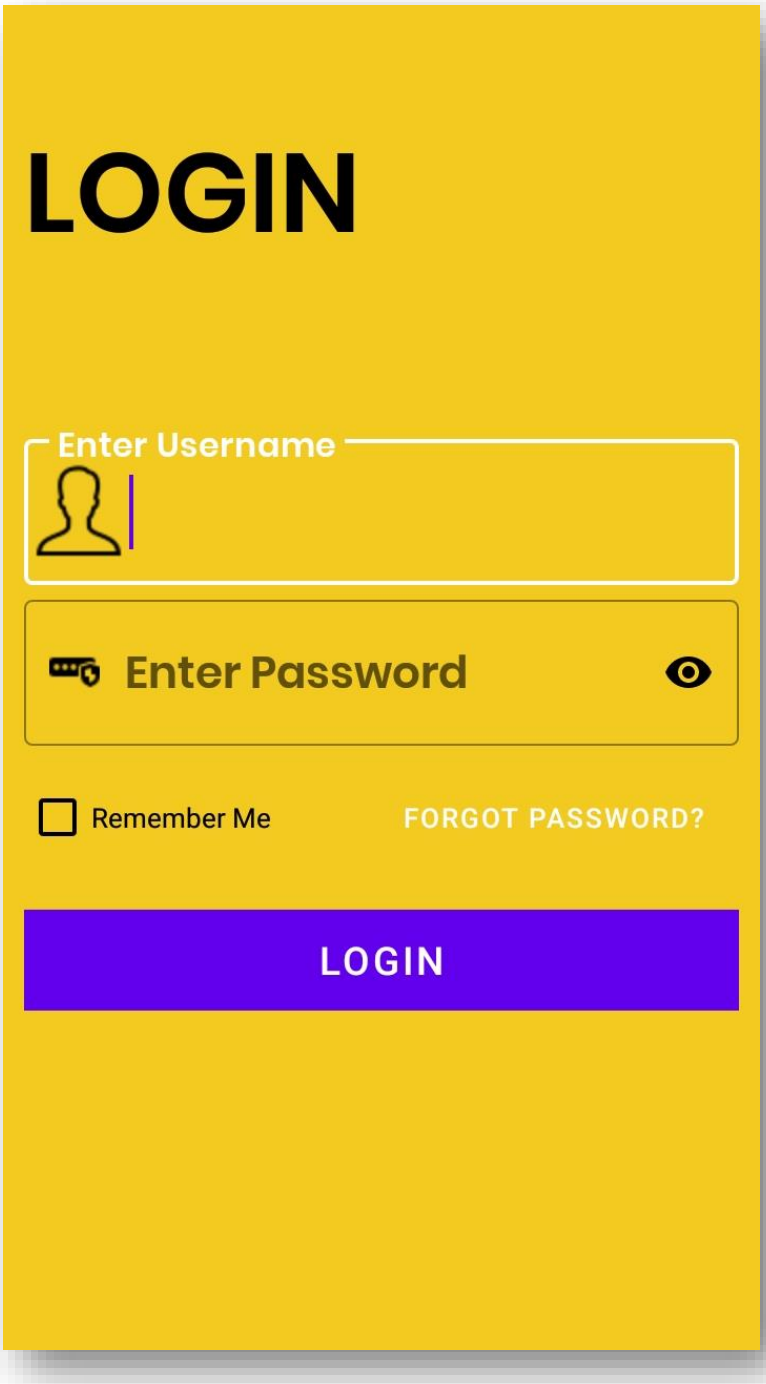
Annexures

User interface of the project

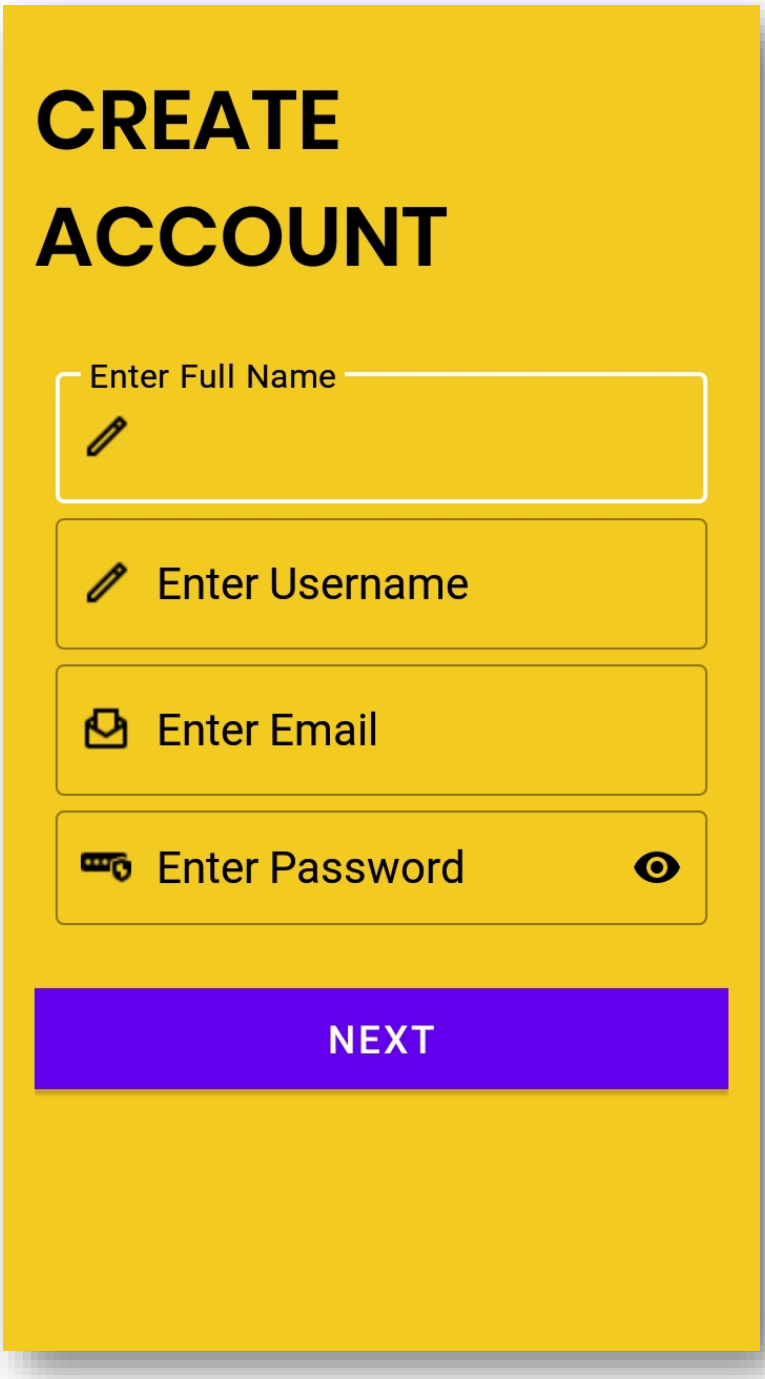
1. **Landing page**



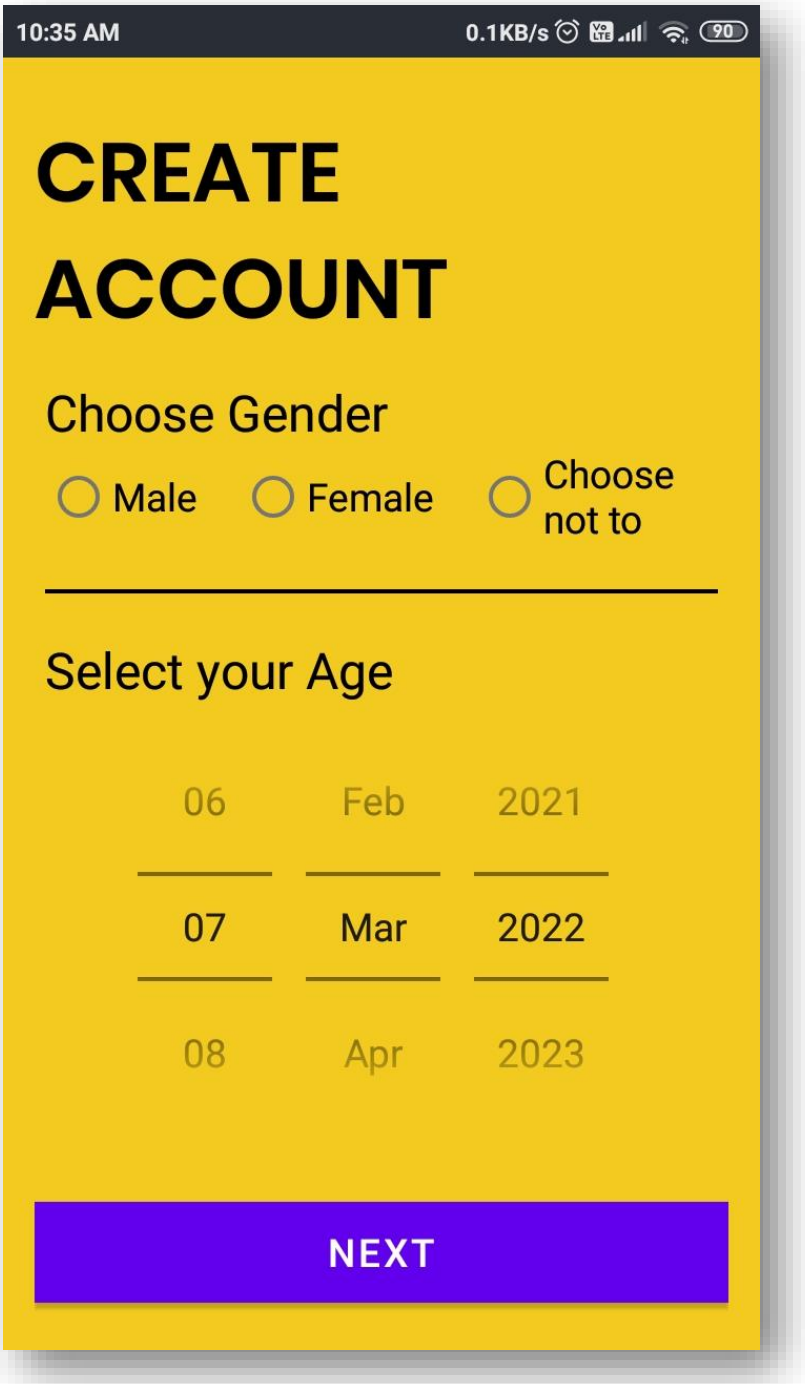
2. **Login**


LOGIN
Enter Username
Enter Password
Remember Me
FORGOT PASSWORD?
LOGIN

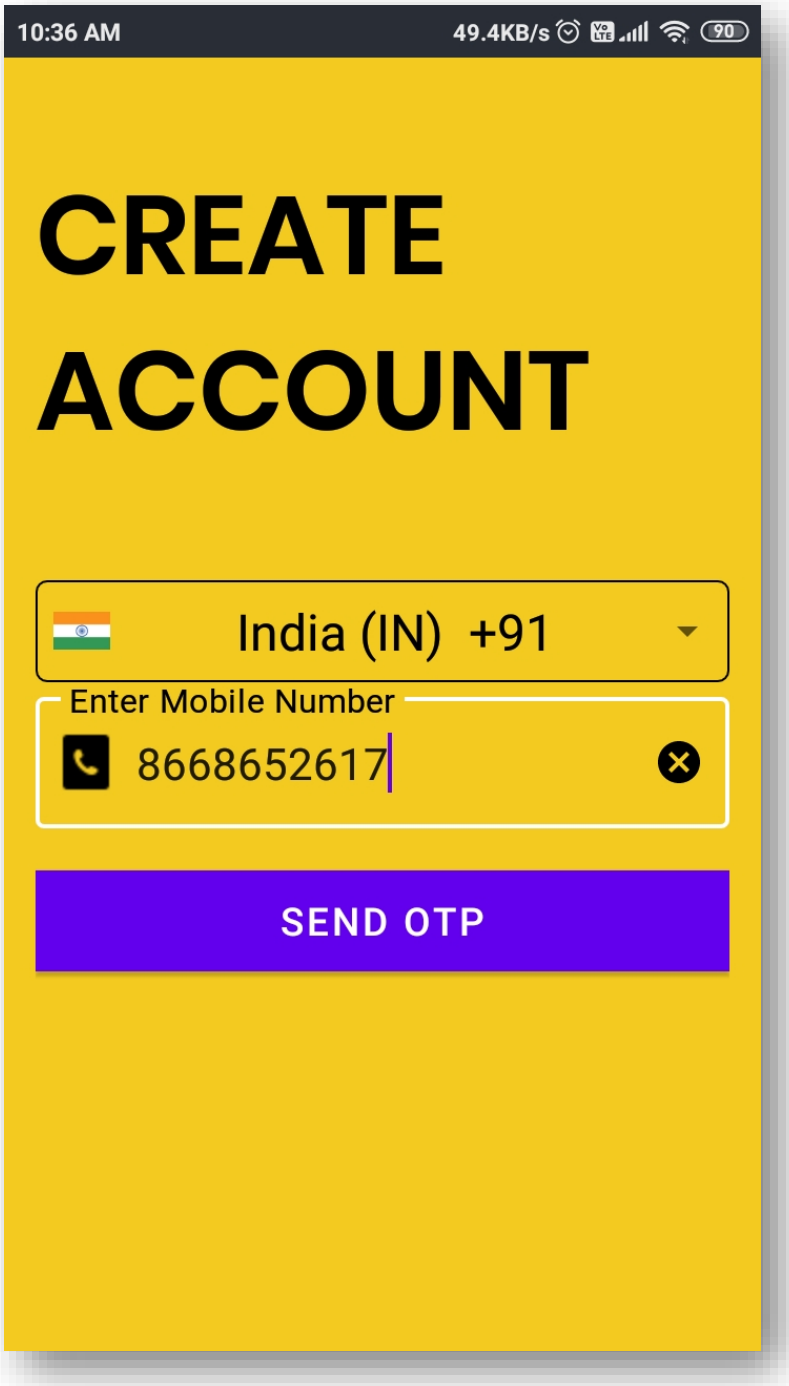
3. **Create account**



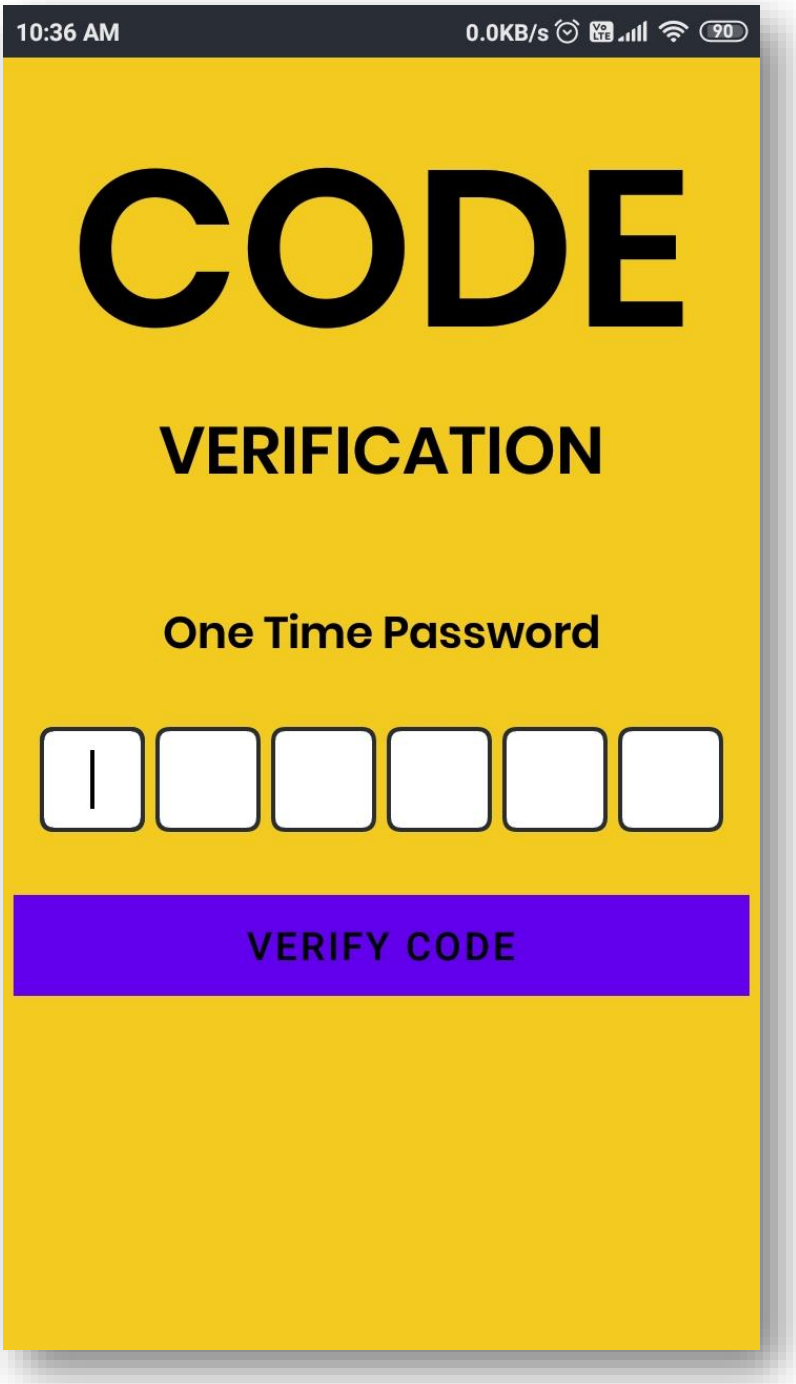
4. **Create account**



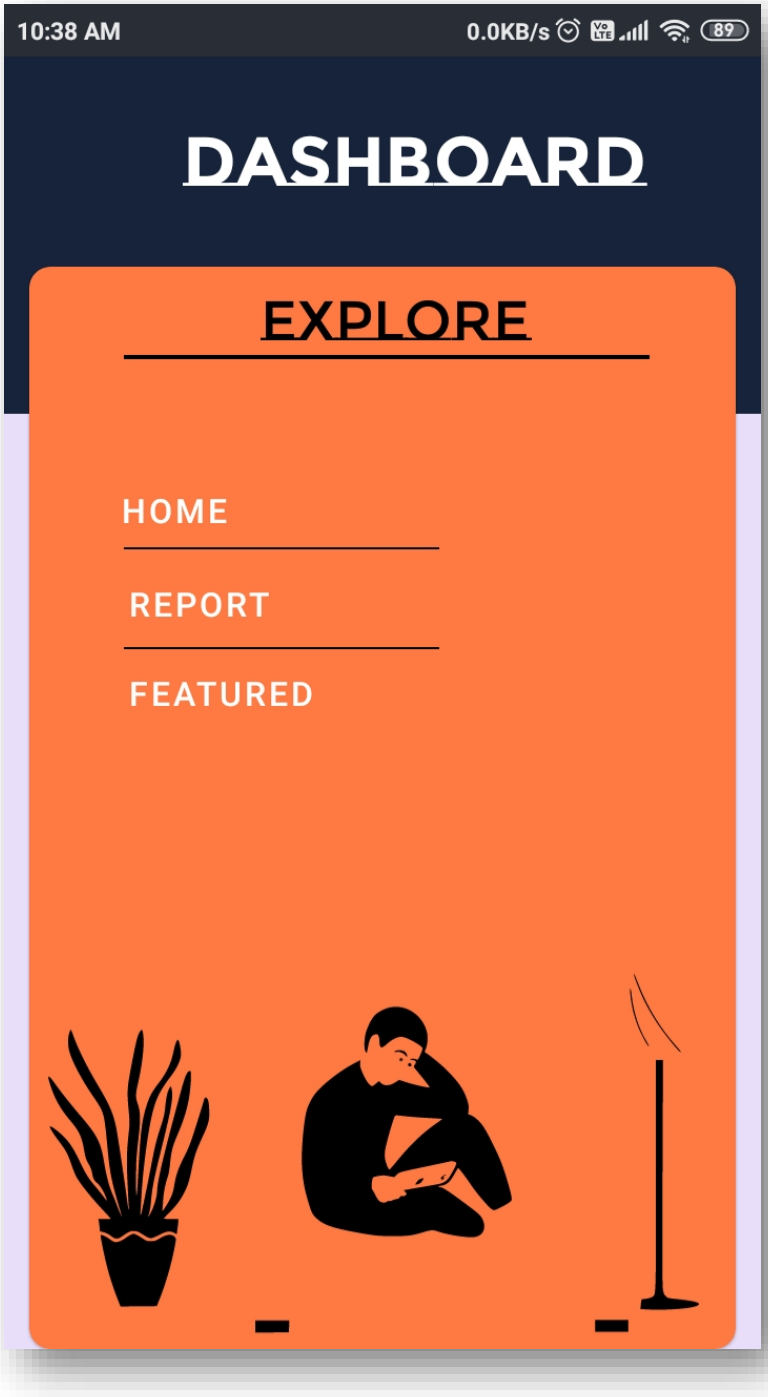
5. **Create account**



6. **OTP verification**



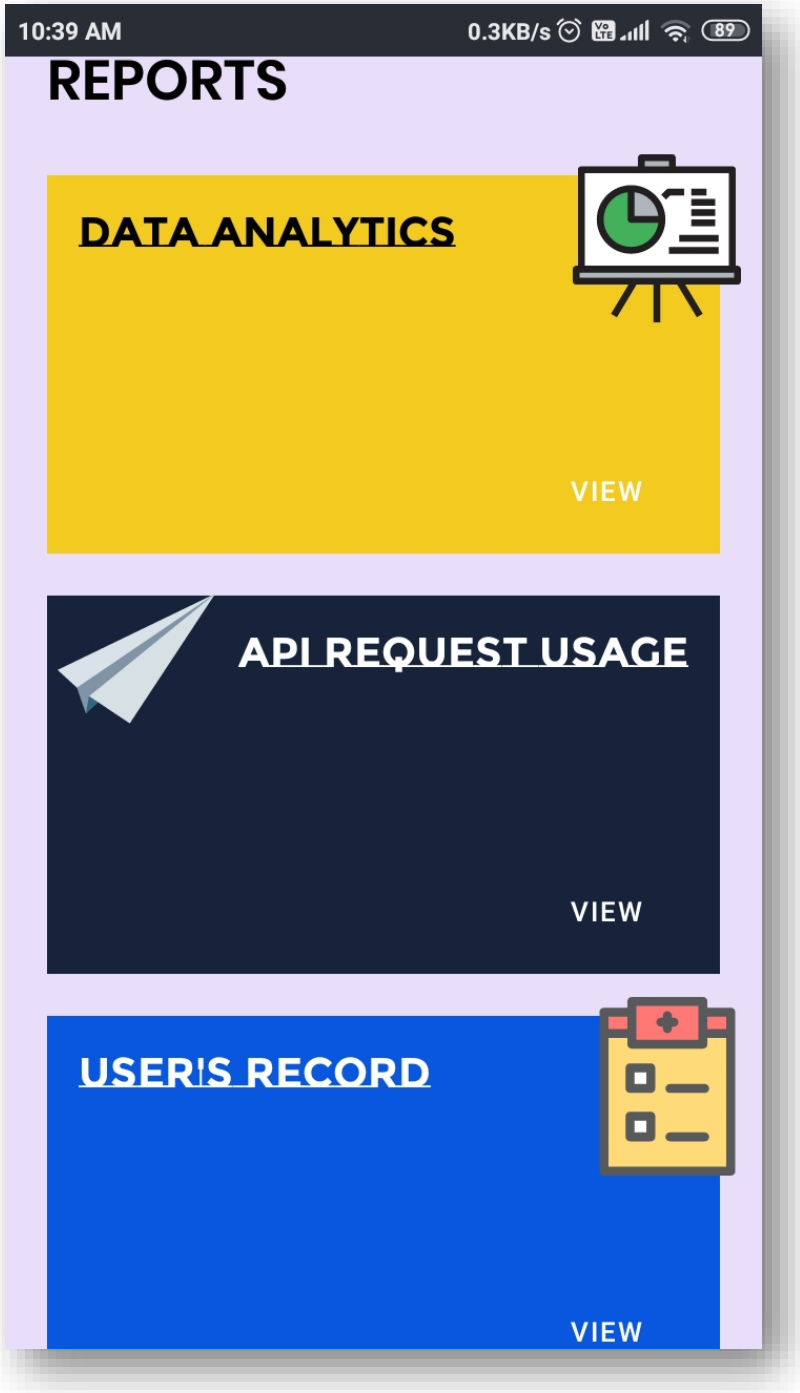
7. **Dashboard**



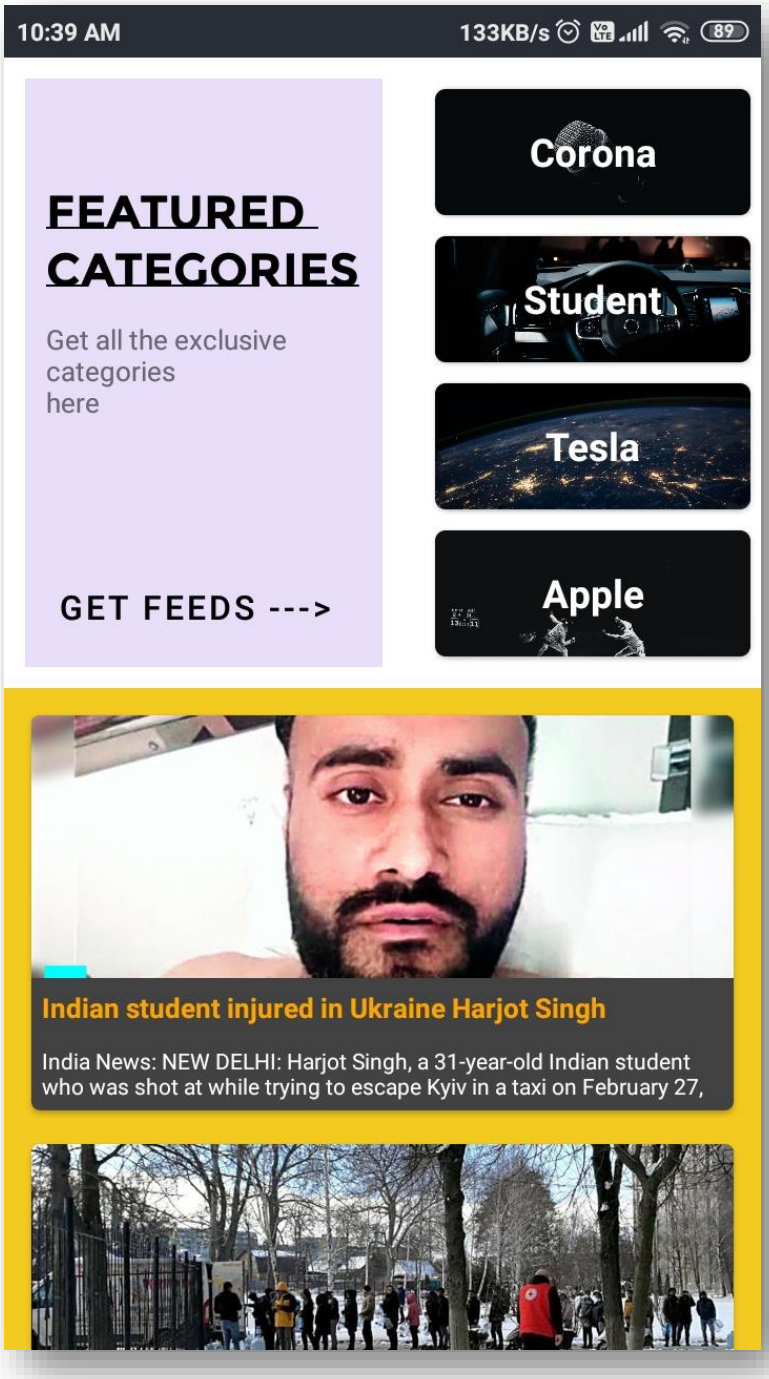
8. **Home**


10:39 AM
2.1KB/s
Newsify
Entertainment
Health
NASA Scientists Dig into Apollo-era Lunar Samples to
Scientists at NASA are tapping into one of the last unopened Apollo-era lunar samples to learn more about the Moon and prepare for a return to
2022
UP Polls Phase 7: 8.58% Voter Turnout Till 9 am, 613
UP Election 2022 Phase 7 Voting Live, Uttar Pradesh Election Sixth Phase Polling Updates: The polling for the seventh and terminal phase

9. **Reports**


10:39 AM
0.3KB/s
REPORTS
DATA ANALYTICS
VIEW
API REQUEST USAGE
VIEW
USERIS RECORD
VIEW

10. Featured


10:39 AM
133KB/s
FEATURED CATEGORIES
Get all the exclusive categories here
GET FEEDS --->
Corona
Student
Tesla
Apple
Indian student injured in Ukraine Harjot Singh
India News: NEW DELHI: Harjot Singh, a 31-year-old Indian student who was shot at while trying to escape Kyiv in a taxi on February 27,